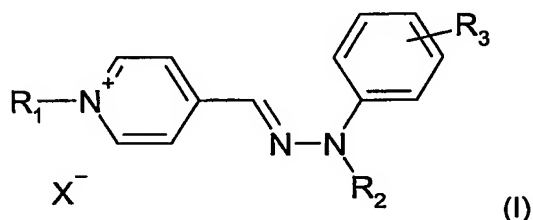


AMENDED CLAIMS

[received by the International Bureau on 14 April 2003 (14.04.2003);
original claims 4-9 amended; remaining claims unchanged (5 pages)]

1. A yellow cationic dye of formula (I)



wherein

R₁ and R₂ are each independently of the other a C₁-C₈alkyl radical or an unsubstituted or substituted benzyl radical, with the proviso that at least one of the substituents R₁ and R₂ is an unsubstituted or substituted benzyl radical,

R₃ is hydrogen, C₁-C₈alkyl, C₁-C₈alkoxy, cyanide or halide, preferably hydrogen, and

X⁻ is an anion,

with the proviso that, when R₁ is a benzyl radical and R₂ is a methyl radical,

R₃ is not hydrogen.

2. A yellow cationic dye of formula (I) according to claim 1,

wherein

R₁ is a methyl radical and

R₂ is a benzyl radical,

R₃ is hydrogen and

X⁻ is an anion.

3. A yellow cationic dye of formula (I) according to claim 1,

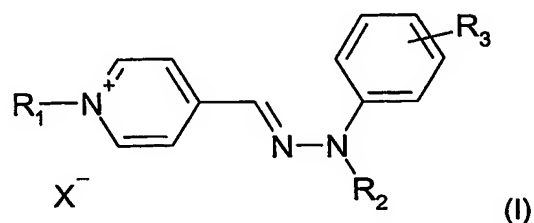
wherein

R₁ and R₂ are a benzyl radical,

R₃ is hydrogen and

X⁻ is an anion.

4. A process for the preparation of a yellow dye of formula (I)



wherein

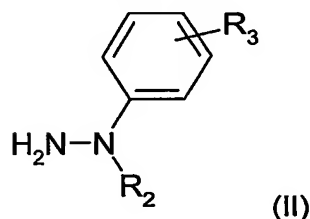
R_1 and R_2 are each independently of the other a C_1 - C_8 alkyl radical or an unsubstituted or substituted benzyl radical, with the proviso that at least one of the substituents R_1 and R_2 is an unsubstituted or substituted benzyl radical,

R_3 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, cyanide or halide, preferably hydrogen, and

X^- is an anion,

that comprises

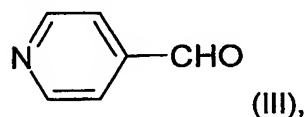
a) reacting a phenylhydrazine of formula (II)



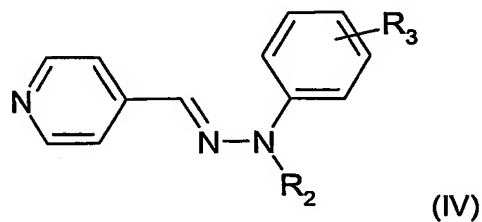
wherein

R_2 is hydrogen, a C_1 - C_8 alkyl radical or an unsubstituted or substituted benzyl radical and

R_3 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, cyanide or halide, preferably hydrogen, with a 4-pyridylaldehyde of formula



by the addition of an acid to form a hydrazone of formula

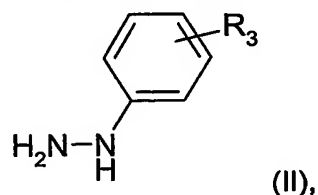


and

b) then reacting the latter compound of formula (IV) with an alkylating or benzylating agent to form a compound of formula (I).

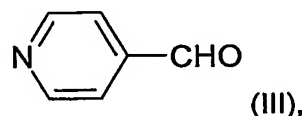
5. A process according to claim 4 that comprises

c) reacting a phenylhydrazine of formula (II)

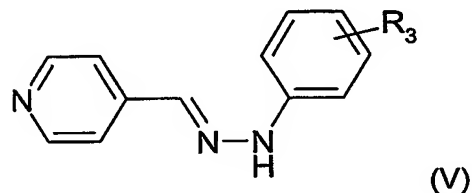


wherein

R_3 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, cyanide or halide, preferably hydrogen, with a 4-pyridylaldehyde of formula

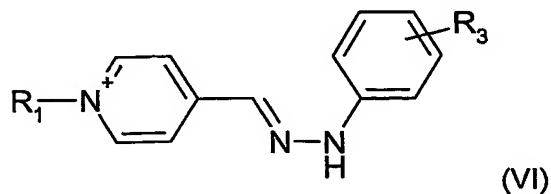


by the addition of an acid to form a hydrazone of formula



and

d) then reacting the latter compound of formula (V) with an alkylating or benzylating agent to form a quaternisation compound of formula (VI)

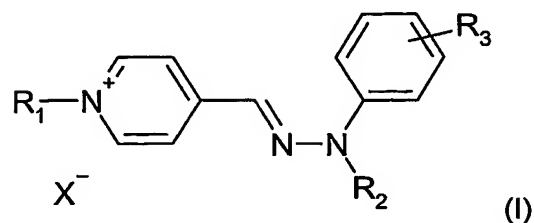


wherein

R_1 is a C_1 - C_8 alkyl radical or an unsubstituted or substituted benzyl radical, and

e) subsequently reacting, in the presence of a base, with an alkylating or benzylating agent to form a compound of formula (I).

6. A composition comprising at least one yellow dye of formula (I)



wherein

R_1 and R_2 are each independently of the other a C_1 - C_8 alkyl radical or an unsubstituted or substituted benzyl radical, with the proviso that at least one of the substituents R_1 and R_2 is an unsubstituted or substituted benzyl radical,

R_3 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, cyanide or halide, preferably hydrogen, and

X^- is an anion, or prepared in accordance with a process according to claim 4 or claim 5.

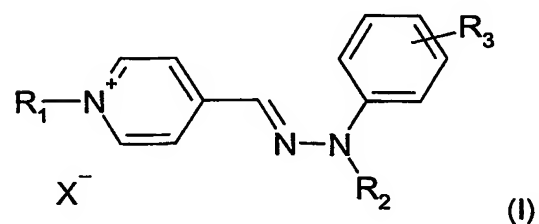
7. A composition according to claim 6 comprising

- a) a compound of formula (I),
- b) a further dye, or an oxidation dye precursor, and
- c) water and,
- d) optionally, further additives.

8. A composition according to claim 6 comprising

- j) a compound of formula (I),
- k) a capped diazonium compound,
- l) a water-soluble coupling component and,
- m) optionally, further additives.

9. A method of dyeing organic material, especially human hair, that comprises bringing into contact with the organic material a yellow cationic dye of formula (I)



wherein

R_1 and R_2 are each independently of the other a C_1 - C_8 alkyl radical or an unsubstituted or substituted benzyl radical, with the proviso that at least one of the substituents R_1 and R_2 is an unsubstituted or substituted benzyl radical,

R_3 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, cyanide or halide, preferably hydrogen, and

X^- is an anion, or a yellow cationic dye of formula (I) prepared according to a process of claim 4 or 5, or a composition according to any one of claims 6 to 9, and, optionally, further dyes.

10. A method according to claim 9, wherein a yellow cationic dye of formula (I) and, in addition, in succession in any desired order, or simultaneously, a capped diazonium compound and a water-soluble coupling component, are applied to the material to be dyed under conditions in which coupling does not take place initially, and then the capped diazonium compound disposed on the material is caused to react with the coupling component.

11. A method according to claim 9, wherein, first of all, an oxidation dye mixture that has been rendered alkaline comprising at least one developer substance and at least one coupler substance as well as an oxidising agent and, optionally, a dye of formula (I) and/or a further cationic dye, is applied to the hair, and then, after a period of action, a composition that has been rendered acidic comprising at least one acid and, optionally, a dye of formula (I) and/or a further cationic dye, is applied to the hair, at least one cationic direct dye being used in the method.

12. A method according to claim 9, wherein, first of all, an oxidation dye mixture that has been rendered alkaline comprising at least one developer substance and at least one coupler substance as well as an oxidising agent and, optionally, a dye of formula (I) according to claim 1 and/or a further cationic dye, is applied to the hair, and then, after a period of action, an oxidation dye mixture that has been rendered acidic comprising at least one developer substance and at least one coupler substance as well as an oxidising agent and, optionally, a dye of formula (I) and/or a further cationic dye, is applied to the hair, a cationic direct dye being used at least once in the method.